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EXAMINER

ZIA, SYED

ART UNIT

PAPER NUMBER

2431

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 09/945,123	Applicant(s) LEYDIER ET AL.	
	Examiner SYED ZIA	Art Unit 2431	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 June 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7, 10-35 and 37-48 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-7, 10-15, 27-35, 37-38, 43 and 44 is/are rejected.
- 7) ☒ Claim(s) 16-26, 39-42 and 45-48 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

This office action is in response to remarks and amendments filed on June 20, 2008. Original application contained Claims 1-48. Applicant currently amended claims 1, 45-48, and cancelled Claims 8-9. The amendment filed have been entered and made of record. Presently claims 1-7, 10-35, and 37-48 are pending.

Allowable Subject Matter

1. Claims 16-26 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. The reasons why the claims are allowable are because prior art fails to the components that make up the pressure sensor on an integrated circuit. In prior art and non-patent literature there is not disclosed or taught the components that make up the pressure sensor.
2. Claims 39-42, 45-48 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. The reasons why these claims are allowable are for components that make up the pressure sensor. In prior art and non-patent literature there is not disclosed or taught the components that make up the pressure sensor.

Response to Arguments

Applicant's arguments filed on July 20, 2008 have been fully considered but they are not persuasive because of the following reasons:

1. Applicant argument regarding claim rejection under 35 U.S.C. 101 found persuasive and rejection has been withdrawn
2. Regarding Claims 1 applicant argued that in the cited prior art the microphone of Nitta, being laminated to the card base, is definitely not "integrated into a portion of the integrated circuit".

This is not found persuasive. The system of cited prior art teaches a IC card used for identifying users. The transducer supplies a pair of plane electrodes and voltage fluctuations are detracted by amplifier through a pair of leads to produce vibrations in piezoelectric ceramic sheet. Therefore, microphone of Nita is integrated in the card.

3. Regarding Claims 1 applicant argued that in the cited prior art Nitta, "However, the next step, claimed by the inventors, of moving the microphone onto the IC has not been disclosed or suggested by Nitta".

The examiner respectfully disagrees The applicant argues limitations that which are not claimed, in response to applicant argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e. *the next step, claimed by the inventors, of moving the microphone onto the IC has not been disclosed*) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

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4. Regarding Claims 1 applicant argued that Nitta only discloses a card performing speech recognition, which is different than voice authentication, speech recognition does not need to extract voice characteristics of the user, and Nita disclose Vocal commands not voice authentication.

This is not found persuasive. In the art of authenticating users of smart cards, the voice and speech are used interchangeably. The system of cited prior art teaches the IC card that can store or analyze the speech and generate a corresponding command, or data, such as authentication, by inputting commands or data by voice. Therefore, Nita does teach authentication and authorization of users based on the recognition of user's voice

As a result, the system of cited prior arts does implement and teaches a system and method for a smart card with an integrated circuit that is able to receive and process user voice information for tasks such as authentication, identification, command execution (Fig.1-15).

Applicants clearly have failed to explicitly identify specific claim limitations, which would define a patentable distinction over prior arts.

Therefore, the examiner asserts that cited prior art does teach or suggest the subject matter recited in independent Claims 1, 31, and in subsequent dependent Claims. Accordingly, rejections for claims 1-7, 10-15, 27-35, 37-38, and 43-44 are respectfully maintained.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 37 rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Applicant claims "the content of the user's speech". It is not clear what does it mean in the context of speech spoken into the voice sensor. Is there a separate interface to recognize the content of user's speech?

Claim 14 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The claims use "ISO 7816" to describe electronic identification card, such as smart card, in the above mentioned claims. The ISO 7816 standard cannot be used in the claim language because it is a standard which undergoes constant evolution, and the specification provides no mention as of which date the standard is used. Therefore, the claims are deemed indefinite

Claim 13 recites the limitation "the speech" in line 2. There is insufficient antecedent basis for this limitation in the claim.

Claim 10 recites the limitation "user speaking" in line 4. There is insufficient antecedent basis for this limitation in the claim.

Claim 31 recites the limitation "the voice" in line 2. There is insufficient antecedent basis for this limitation in the claim.

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Claims 32-33 recites the limitation "the user's voice" in line 3. There is insufficient antecedent basis for this limitation in the claim.

Claim 37 recites the limitation "the user's speech" in line 2. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-2, 10, 12-13, 31, 35, 37, 43 are rejected under 35 U.S.C. 102(b) as being anticipated by Nitta (4,851,654).

5. As per claim 1, Nitta discloses an integrated circuit (fig. 1A sheet 1), including: a biometric voice sensor is inherent in Nitta, because Nitta discloses a microphone(ref # 9 fig. 1A sheet 1), and Nitta discloses that when a card holder utters some words to the card the microphone(9) receives the speech and transduces it into speech signals(see col. 2, lines 59-61). Nitta discloses wherein the voice sensor is configured to detect the speech of the user and to produce a signal responsive to the speech of the user(see col. 2, lines 59-64); and a voice processing circuit inherent in Nitta, integrated into a portion of the integrated circuit, wherein the voice processing circuit is configured to receive the signal from the biometric voice sensor and to process the signal to extract the voice characteristics representative of the user that is included on the ic card(see col. 2, lines 59-64, col. 4, lines 40-66).

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6. As per claim 2, Nitta discloses wherein the integrated circuit (ref# 1, fig. 1A sheet 1) further includes memory for storing information indicative of at least one user's voice characteristics (see col. 6, lines 31-35).

7. As per claim 10, Nitta discloses wherein the integrated circuit is configured to execute a voice-transmitted command by comparing the characteristics of the voice sensor signal to information stored in the memory indicative of a user speaking the command(see col. 5, lines 10-53).

8. As per claim 12, Nitta discloses wherein the integrated circuit is configured to recognize the content of the user's speech (see col. 2, lines 59-67).

9. As per claim 13, Nitta discloses wherein the recognized content is used to classify the speech by keywords (see col. 4, lines 31-66).

10. As per claim 31, Nitta discloses method of processing voice waves with a portable device(see col. 2, lines 36-42), including: generating an electrical signal with a voice sensor of the portable device responsive to speech spoken into the voice sensor(col. 2, lines 23-27, 59-67); analyzing the electrical signal with a signal processing circuit of the portable device to detect characteristics of the voice; and comparing the detected voice characteristics with information stored in a memory of the portable device and indicative of a user's voice(see col. 2, lines 59-68, col. 3, lines 1-7, col. 6, lines 8-16).

11. As per claim 35, Nitta discloses executing a voice-transmitted command (see col. 4, lines 40-66).

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12. As per claim 37, Nitta discloses recognizing the content of the user's speech (see col. 2, lines 61-64, col. 3, lines 1-3).

13. As per claim 43, Nitta discloses responsive to the comparison between the detected voice characteristics and the stored information, enabling communication between the portable device and the external data processing system(see col. 2, lines 59-68, col. 3, lines 1-7, col. 6, lines 8-16).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

15. Claims 4, 33, is rejected under 35 U.S.C. 103(a) as being unpatentable over Nitta (4,851,654) in view of Takahashi (4,961,229).

16. Claims 4, 33 Nitta does not disclose wherein the integrated circuit card uses the stored information to authenticate the user. Nitta only discloses comparison of spoken information with the stored information to translate into commands (see col. 6, lines 31-35). Takahashi discloses wherein the integrated circuit card uses the stored information to authenticate the user (see col. 1, lines 41-45, col. 2, lines 59-65). It would have been obvious to one of ordinary skill in the art at the time of the invention to include wherein the integrated circuit card uses the stored information to authenticate the user of Takahashi with Nitta, the motivation is that a user can be authenticated to determine if the voice uttered by the user is a registered person (see col. 2, lines 63-65 of Takahashi).

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17. Same Motivation as above. As per claim 32, Nitta does not disclose wherein the stored information is to identify the user. Takahashi discloses wherein the stored information is to identify the user (see col. 2, lines 52-65).

18. Claims 3, 11, 14, 28-30, are rejected under 35 U.S.C. 103(a) as being unpatentable over Nitta (4,851,654) in view of Kennedy (6,084,967).

19. As per claim 3, Nitta does not disclose means for establishing a data link to download data from which the stored information is derived. Kennedy discloses means for establishing a data link to download data from which the stored information is derived (see col. 6, lines 10-35). It would have been obvious to one of ordinary skill in the art at the time of the invention to include a data link to download data; the motivation is that downloading data is a more efficient method of transferring information.

20. As per claim 11, Kennedy discloses wherein the integrated circuit is further configured to encrypt the voice sensor signal using an algorithm (see col. 5, lines 50-54). It would have been obvious to one of ordinary skill in the art at the time of the invention to include encrypting the voice sensor signal of Kennedy with Nitta, the motivation is that encrypting information is a more secure method of insuring that the signal cannot be tapped.

21. As per claim 14, Kennedy discloses wherein the device includes a plastic frame(see col. 1, lines 44-49, col. 2, lines 43-49) in which the integrated circuit is embedded(see col. 1, lines 44-49, see col. 2, lines 43-49) and wherein the plastic frame is compliant with ISO 7816, is inherent in Kennedy, because Kennedy discloses a smart card(see col. 2, lines 30-35), the smart cards are inherent for using ISO 7816 this is the standard for smartcards, Nitta does not disclose

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this. The method of using ISO 7816 standard for smartcards is well-known in the art, as disclosed in Kennedy.

22. As per claim 28, Kennedy discloses a battery power source to power the device (see col. 2, lines 36-37). It would have been obvious to include a battery power source to power the device of Kennedy with Nitta, the motivation is that a battery power source such as a card reader is needed to read the device (see col. 2, lines 36-40 of Kennedy).

23. As per claim 29, Kennedy discloses a wireless port configured to receive an electromagnetic signal to power the device (see col. 2, lines 20-35). It would have been obvious to include a wireless port of Kennedy with Nitta, the motivation is that by providing a wireless port to receive the signal to power the device is a more efficient method that does not require the use of cords to power the device.

24. Same Motivation as above (see claim 29). As per claim 30, Kennedy discloses wherein the communication interface unit further includes a wireless port for communicating information to and from the device in contactless applications (see col. 2, lines 20-35).

25. Claims 5-7 and 34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nitta in view of Takahashi as applied to claim 4 and 33 respectively above, and further in view of Kennedy.

26. As per claim 5, Kennedy discloses wherein the information is indicative of the voice characteristics of multiple users and wherein the device is configured to authenticate each of the multiple users(see col. 5, lines 10-20), Nitta does not disclose. It would have been obvious to one of ordinary skill in the art at the time of the invention to include multiple users of Kennedy

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with Nitta, the motivation is that by having multiple users allows many different people to enroll in the system (see col. 5, lines 10-20 of Kennedy).

27. Same Motivation as above (see claim 5). As per claim 6, Kennedy discloses wherein the device contains user specific profile information for each of the multiple users that enable user specific device functionality (see col. 5, lines 10-20).

28. As per claim 7, Kennedy discloses wherein the integrated circuit is configured to authenticate a user of the device by comparing the characteristics of the voice sensor signal to information stored in memory indicative of a predetermined password(i.e. user's name)(see col. 2, lines 55-65, col. 3, lines 1-6), Nitta does not disclose. It would have been obvious to one of ordinary skill in the art at the time of the invention to include a predetermined password stored on the integrated circuit of Kennedy with Nitta, the motivation is that by the user being authenticated by speaking the predetermined password (i.e. voiceprint) is a more specific method of identify the user, by not only authenticating by the users voice but also the password that is spoken by the user.

30. As per claim 34, Kennedy discloses wherein authenticating the user includes comparing the characteristics of the voice sensor signal to information stored in the memory indicative of the user speaking a password(see col. 2, lines 65-67, col. 3, lines 1-22). It would have been obvious to one of ordinary skill in the art at the time of the invention to include a user speaking a password of Kennedy with Nitta, the motivation is that by the user being authenticated by speaking the predetermined password (i.e. voiceprint) is a more specific method of identify the user, by not only authenticating by the users voice but also the password that is spoken by the user.

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31. Claims 15, 27, 38, 44 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nitta (4,8651,654) in view of Maes et al. (6,411,933).

32. Nitta discloses a voice sensor (ref# 9 fig. 1A sheet 1). However, Nitta does not disclose a pressure sensor. Maes discloses a pressure sensor (see col. 8, lines 25-65). It would have been obvious to combine Maes with Nitta to include a pressure sensor, the motivation is that Maes discloses a need exists for techniques that can better guarantee that a speaker physically produced a subject utterance(see col. 2, lines 46-48 of Maes), a need exists for techniques that can better guarantee that a given biometric attribute has been physically produced by the person offering the biometric attribute as his own(see col. 2, lines 46-50 of Maes), thus Maes discloses pressure sensor, that measures the pressure waves of the human vocal tract(see col. 8, lines 25-37).

33. As per claim 27, Nitta discloses a communication interface unit(see col. 2, lines 11-14) including a portion of the integrated circuit and connected to the voice processing circuit(see col. 2, lines 59-68, col. 3, lines 1-7). Nitta does not disclose wherein the interface unit includes a serial interface for communicating information through contacts according to an at least one of an ISO and USB protocol. However, Maes discloses wherein the interface unit includes a serial • interface for communicating information through contacts according to an at least one of an IS Protocol (see col. 6, lines 1-8, col. 12, lines 5-18). It would have been obvious to include the serial interface for communicating information through contacts according to the ISO protocol of Maes with Nitta, because providing a serial interface provides means for establishing a communication link between devices and other peripheral devices (see col. 6, lines 1-8 of Maes).

34. As per claim 38, same motivation applies above. Nitta does not disclose wherein

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generating the electrical signal includes measuring variations in an electrical parameter caused by the voice pressure wave modifying an electrical characteristic of a pressure sensor of the integrated circuit. Maes discloses wherein generating the electrical signal includes measuring variations in an electrical parameter caused by the voice pressure wave modifying an electrical characteristic of a pressure sensor of the integrated circuit(see col. 2, lines 46-50, col. 8, lines 25-37).

35. As per claim 44, Nitta does not disclose wherein communication between the processing system and the smart card is done via at least one of an ISO port, a USB port, and a wireless port. However, Maes discloses a serial interface for communicating information through contacts according to an at least one of an ISO protocol(see col. 6, lines 1-8, col. 12, lines 5-18). It would have been obvious to include the serial interface for communicating information through contacts according to the ISO protocol of Maes with Nitta, because providing a serial interface provides means for establishing a communication link between devices and Other peripheral devices (see col. 6, lines 1-8 of Maes).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to SYED ZIA whose telephone number is (571)272-3798. The examiner can normally be reached on 9:00 to 5:00.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ayaz Sheikh can be reached on 571-272-3795. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

SZ

October 13, 2008

/Syed Zia/

Primary Examiner, Art Unit 2431